**Directory of U.S. Military Rockets and Missiles**
**Appendix 1: Early Missiles and Drones**

# GAM-67

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# Radioplane B-67/GAM-67 *Crossbow*

In the early 1950s, the U.S. Air Force had a requirement for a missile to home in on and destroy enemy ground radar systems, and in 1953 Radioplane received a development contract under project **MX-2013**. Radioplane's Model RP-54D *Crossbow* was a derivative of the company's YQ-1B subscale target drone, and was initially designated **B-67**. This was changed to **GAM-67** in 1955 when the USAF abandoned the use of aircraft designations for guided missiles. The first successful powered flight of an **XGAM-67** prototype occurred in July 1956, and the first guided flight succeeded in May 1957.

*Photo: via Jones*

**XB-67 (XGAM-67)**

The XGAM-67 was a small turbojet-powered vehicle with straight wings and a twin vertical tail. One noteworthy feature was that only the left vertical fin had a movable rudder. The missile was air-launched from underwing pylons on B-50 or B-47 bombers, and the latter could carry up to four *Crossbows*. For its intially planned role of anti-radar missile, the *Crossbow* was equipped with a passive multiple-frequency radar seeker. Once the target was detected, the missile dived on it at near sonic speed, and the warhead detonated on impact. At one time it was proposed to arm the GAM-67 with a 40 kT W-31 nuclear fission warhead. In-flight control was by an autopilot and a radio-command guidance system.

It was also proposed to use the *Crossbow* missile as an ECM drone to jam enemy radars, as a battlefield surveillance drone or as a target drone. In these roles, the GAM-67 would have been recovered by a parachute descent followed by a soft landing on inflatable plastic cushions stored in streamlined underwing containers.

*Photo: USAF*

**XGAM-67**

The *Crossbow* anti-radar missile program was cancelled in July 1957 because of technical and funding difficulties. It was replaced by Weapons System 121B *Longbow*, but this was eventually cancelled, too. The proposed alternative roles for the GAM-67 were not adopted, either, and so the development of *Crossbow* ended around 1960. Only 14 XGAM-67 missiles were built.

# Specifications

**Note:** Data given by several sources show slight variations. Figures given below may therefore be inaccurate!

Data for **XGAM-67**:

| | |
|---|---|
| Length | 6.10 m (20 ft 0.2 in) |
| Wingspan | 3.86 m (12 ft 7.8 in) |
| Diameter | 81 cm (32 in) |
| Height | 1.52 m (5 ft) |
| Weight | 1220 kg (2700 lb) |
| Speed | Mach 0.86 |
| Ceiling | 12200 m (40000 ft) |
| Range | 480 km (300 miles) |
| Endurance | 30 min |
| Propulsion | Continental J69-T-17 turbojet; 4.4 kN (1000 lb) |

# Main Sources

[1] Bill Gunston: "The Illustrated Encyclopedia of Rockets and Missiles", Salamander Books Ltd, 1979
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[3] Lloyd S. Jones: "U.S. Bombers", Aero Publishers, 1974
[4] Richard A. Botzum: "50 Years of Target Drone Aircraft", Northrop, 1985

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